03050107-050

(Tyger River)

General Description

Watershed 03050107-050 is located in Spartanburg and Union Counties and consists primarily of the ***Tyger River*** and its tributaries from its confluence with the South and North Tyger Rivers to its confluence with the Broad River. The watershed occupies 138,402 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Wilkes-Madison series. The erodibility of the soil (K) averages 0.24, and the slope of the terrain averages 20%, with a range of 6-45%. Land use/land cover in the watershed includes: 81.8% forested land, 10.9% scrub/shrub land, 6.2% agricultural land, 0.7% urban land, 0.3% barren land, and 0.1% water.

The Tyger River is formed by the confluence of the South Tyger River Watershed and the North Tyger River Watershed. The Tyger River then accepts drainage from Nichol Branch (Kelly Branch), Vise Branch, Harrelson Branch (Wofford Branch, Aiken Branch), Jimmies Creek, Cane Creek (Martha Shands Branch, Williams Branch, Trail Branch), Motley Branch, Hackers Creek, and Dutchman Creek. Dutchman Creek accepts drainage from Harrison Branch, Newman Branch, Smith Creek (Jennings Branch), Powder Spring Branch, Shands Branch (Pennywinkle Branch), Paint Bearden Branch, Bearden Branch, another Wofford Branch, Wiley Fork Creek (Carson Branch), and Dry Branch. Cowdens Creek enters the river next followed by Mill Creek, another Wofford Branch, Holcombe Branch, Isaacs Creek, and Sparks Creek. Further downstream, the Tyger River accepts drainage from the Fairforest Creek Watershed, the Tinker Creek Watershed, Hawkins Creek, Johnsons Creek, Padgetts Creek, Evans Branch, Rennicks Branch, Duffs Branch, Peters Creek, and Cane Creek (Brocks Creek). There are a few ponds and lakes (totaling 133.7 acres) in this watershed used for recreational purposes and 274.8 stream miles, all classified FW. The lower half of the watershed resides within the Sumter National Forest. Rose Hill State Park is located near the confluence of the Tyger River and Fairforest Creek.

Water Quality

Station #	Type	Class	Description
B-008	P	FW	TYGER RIVER AT S-42-50, E OF WOODRUFF
B-019	S	FW	JIMMIES CREEK AT S-42-201, 2 MI E OF WOODRUFF
B-786	BIO	FW	JIMMIES CREEK AT STEWART RD, 1MI UPSTREAM OF SR 113
B-733	BIO	FW	DUTCHMAN CREEK AT S-42-511
B-051	P	FW	TYGER RIVER AT SC 72, 5.5 MI SW OF CARLISLE
B-777	BIO	FW	CANE CREEK AT SR 359

Tyger River - There are two monitoring sites along the Tyger River. At the upstream site ***(B-008),*** aquatic life uses are fully supported; however, there are significant decreasing trends in dissolved oxygen concentration and pH, and a significant increasing trend in turbidity. A very high concentration of chromium was measured in water in 1998. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen suggest improving conditions for these parameters. At the downstream site ***(B-051),*** aquatic life uses are fully supported. There is a significant decreasing trend in pH and a significant increasing trend in total phosphorus concentrations. In water, a high concentration of zinc and very high

concentrations of lead and chromium were each measured once in 1996. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen suggest improving conditions for these parameters. Recreational uses are not supported at either site due to fecal coliform bacteria excursions; however, a significant decreasing trend in fecal coliform bacteria concentrations suggests improving conditions for this parameter at the downstream site.

Jimmies Creek (B-019) - There are two monitoring sites along Jimmies Creek. At the upstream site ***(B-019)***, aquatic life uses are fully supported. There is a significant decreasing trend in pH and a significant increasing trend in total phosphorus concentrations. Recreational uses are not supported at this site due to fecal coliform bacteria excursions, compounded by a significant increasing trend in fecal coliform bacteria concentrations. At the downstream site ***(B-786),*** aquatic life uses are fully supported based on macroinvertebrate community data.

Dutchman Creek (B-733) - Aquatic life uses are fully supported based on macroinvertebrate community data.

Cane Creek (B-777) - Aquatic life uses are fully supported based on macroinvertebrate community data.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM / ***FACILITY NAME*** / ***PERMITTED FLOW @ PIPE (MGD)*** / ***COMMENT***	***NPDES#*** / ***TYPE*** / ***LIMITATION***
TYGER RIVER SC DEPT. CORR./CROSS ANCHOR CORR. INST. PIPE #: 001 FLOW: 0.35	SC0036773 MINOR DOMESTIC EFFLUENT
TYGER RIVER TRIBUTARY WR GRACE & CO./CL CASEY MINE PIPE #: 001 FLOW: M/R	SCG730096 MINOR INDUSTRIAL EFFLUENT

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME / ***FACILITY TYPE***	***PERMIT #*** / ***STATUS***
WOODRUFF INERT & CELLULOSIC LANDFILL DOMESTIC	DWP-916 CLOSED
LANDFORD ROAD LAND CLEARING CONSTRUCTION	421002-1201 (CWP-013) ----------

Mining Activities

MINING COMPANY / ***MINE NAME***	***PERMIT #*** / ***MINERAL***
WR GRACE & CO. PROVIDENCE MINE	0706-83 VERMICULITE
WR GRACE & CO. C. CASEY MINE	1017-83 VERMICULITE ORE
WR GRACE & CO. RODGERS MINE	0460-83 VERMICULITE
CHAPMAN GRADING & CONCRETE TYGER RIVER PLANT	0494-83 SAND
KING ASPHALT, INC. JOSEPH W. THEO MINE	1124-83 SAND
CAROLINA VERMICULITE CO. FANNIE YOUNG MINE	0585-83 VERMICULITE

Growth Potential

There is an overall low potential for growth in this watershed, which contains portions of the Town of Carlisle and the City of Woodruff. Woodruff is expected to experience residential, commercial, and industrial growth. The lower portion of the watershed is effectively excluded from development by the Sumter National Forest. Union County is actively pursuing the development of a multi-county landfill.